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# ***Special Care Interventions:***

## ***Chest Decompression***

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### ***I. Usage***

1. Chest Decompression is to be performed on those patients who are suffering from a tension pneumothorax.

### ***II. Indications***

1. Tension pneumothorax with any one of the following
  - A. Cyanosis and/or respiratory distress
  - B. Loss of radial pulse
  - C. Loss consciousness



### ***III. Contraindications***

1. None in the emergency setting

### ***IV. Procedural Protocols***

1. The primary site is along the midclavicular line at the second intercostal space.
  - A. The alternative site is between the fifth intercostal space. The nipple is usually over the fifth rib. Identify the side of the pneumothorax, along the midaxillary line.
2. Insert the catheter into the skin over the border of the third rib.
  - A. If using the alternate procedure, insert the catheter over the border of the sixth rib.
3. Advance the catheter over the top of the rib, into the intercostal space.
4. Advance the catheter through the parietal pleura until air escapes.

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### ***IV. Procedural Protocols (continued)***

5. Remove the needle and leave the plastic catheter in place until arrival at the emergency department.



**Note Well:** There are several complications that can occur when performing this procedure. They are

1. Laceration of the intercostal vessel with resultant hemorrhage.
  - A. This is usually due to poor needle placement. By placing the needle inferior to the rib instead of superior, there is an increase in the likelihood of damaging the intercostal artery and vein.
2. Creation of a pneumothorax.
  - A. This is caused by an incorrect assessment of the patient (a pneumothorax is not present).
3. Laceration of the lung.
  - A. Poor technique or incorrect assessment (a pneumothorax is not present).
  - B. Laceration of the lung can cause bleeding and increase the air leak.
4. Infection.
  - A. Adequate skin preparation usually prevents this from occurring.